



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,852	08/21/2003	David N. Schwartz		1851
7590	07/13/2006		EXAMINER	
David N. Schwartz 47 Field Street Pawcatuck, CT 06379			CROSS, ALAN	
			ART UNIT	PAPER NUMBER
			3713	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/604,852	SCHWARTZ, DAVID N.
	<b>Examiner</b>	<b>Art Unit</b>
	Alan Cross	3713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 August 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-19 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 03 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/21/03</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young (US Patent #4614900) in view of (Nikko Sea Tiger Mini Submarine RTR (6-3-02)).

Regarding claim 1: Young teaches a removable remotely controlled propulsion device comprising: An enclosed body (fig. 1); a receiver circuit disposed within said enclosed body being responsive to commands from a remote transmitter and providing electrical signals in response to said commands (fig. 1, #20); a receiver antenna housed within said enclosed body is coupled to said receiver to allow said receiver to receive said commands (fig. 1, #21); a control circuit housed within said enclosed body (fig. 5, #19), said control circuit being electrically coupled to said receiver for generating electrical control signals; a propulsive device coupled to said enclosed body being

electrically coupled to said control circuit (fig. 1, #10) , said propulsive device being responsive to said electrical control signals (col. 1, lines 13-23). Young does not teach a battery pack housed in said enclosed body to provide power to said receiver circuit, said control circuit and said propulsive device and a switch housed in the outside portion of said enclosed body to electrically connect or disconnect said battery pack from said receiver circuit said control circuit and said propulsive device. Nikko Sea Tiger Mini Submarine teaches a enclosed battery pack (tech notes) and it is well known to put a switch housed in the outside portion of said enclosed body to electrically connect or disconnect said battery pack from said receiver circuit said control circuit and said propulsive device. One would need to turn off the device while it would not be in use to save batteries and the electrical components. It would have been obvious to one of ordinary skill in the art to modify Young with the teaching of Nikko to enclose the battery inside the propulsive device and to include a switch to turn off the device to save batteries while not in use.

Regarding claim 2: Young teaches the propulsion device as claimed in claim 1 wherein said propulsive device includes: a sealed housing; a motor contained within said sealed housing, the axle of said motor protruding through said sealed housing', and a propeller coupled to the protruding portion of said axle of said motor (fig. 5 #10,11).

Regarding claim 3: Young teaches the propulsion device as claimed in claim 2, Young does not teach wherein said device includes two said propulsive devices, coupled to said enclosed body being electrically coupled to said control circuit said propulsive devices being responsive to said electrical control signals, said propulsive

devices cooperating to provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter. Nikko teaches wherein said device includes two said propulsive devices, coupled to said enclosed body being electrically coupled to said control circuit said propulsive devices being responsive to said electrical control signals (tech notes), said propulsive devices cooperating to provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter (tech notes). It is well known to use two propulsive devices to control a boat to easy maneuvering and control. It would have been obvious to one of ordinary skill in the art to modify Young with Nikko to use two propulsive devices to control a boat adding maneuverability and control by using two propulsive devices.

Regarding claim 4: Young teaches the propulsion device as claimed in claim 2, where it is well known wherein said device includes a rudder coupled to the rear end of said enclosed body and responsive to said electrical control signals, said propulsive device and said rudder cooperating to provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter. Using a rudder in conjunction with propulsive devices is well known in the art to allow for more control and maneuverability.

Regarding claim 5: Young teaches the propulsion device as claimed in claim 2, wherein said device includes a servomechanism coupled to said propulsive device to provide rotation to said propulsive device and responsive to said electrical control signals (fig. 1,#22), said propulsive device and said servomechanism cooperating to

provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter (col. 3, lines 10-15).

Regarding claim 6: Young teaches the propulsion device as claimed in claim 1 which proved means to couple external components to said propulsion device comprising: an attachment connection located on the bottom of said enclosed body; and external weight, attachable to said attachment connection, to provide increased stability to said propulsion device; and an external skeg, attachable to said attachment connection , to provide increased tracking control to said propulsion device. It is well know in the art to attach ballast and or a skeg to add stability control. Where keels and weighted keels have been used on floating objects. Reference Cicoff et al. describes using a weight at the bottom to keep balance and stability and alternately using a rudder to increase maneuverability.

Regarding claim 7: Young teaches the propulsion device as claimed in claim 1, which provides means to recharge said batteries comprising: an electrical connection attached to the outer surface of said enclosed body and electrically connected to said battery pack; an external charger with a secondary electrical connection; and means to electrically couple said electrical connection to said secondary electrical connection. It is well known in the art to have a connection to charge the internal batteries of a electronic device.

Regarding claim 8: Young teaches the propulsion device as claimed in claim 2, except wherein a protective cover is coupled to said housing of said propulsive device to protect said propeller. Nikko teaches a protective cover is coupled to said housing of

said propulsive device to protect said propeller (picture). It would have been obvious to one of ordinary skill in the art to modify Young use the teaching of Nikko to use a protective cover over the propeller to protect the propeller and users using the device. This would keep down tangling debris from the prop and keep users from injuring ones hands if they had grabbed under the device.

Claim 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of Nikko, and further in view of Brandstatter (US Patent #3824735).

Regarding claim 9: In the combination of Young and Nikko discloses the claim except for a remotely controlled buoyant object comprising: a buoyant body having an open cavity formed therein where the cavity opening is in the lower surface of said buoyant body; a removable propulsion device coupled said cavity, wherein said propulsion device includes an enclosed body. Brandstatter teaches a buoyant body having a open cavity formed therein where the cavity opening is in the lower surface of said buoyant body (fig. 3), (col.1, lines 45-51). It would have been obvious to one of ordinary skill in the art to modify Young and Nikko with the teaching of Brandstatter so that the propulsion unit would snap into the lower portion of the buoyant object. This would allow for the power plant to propel the object with out interfere with the performance of the water craft. Also would make for a seamless integration between different shaped objects.

Regarding claim 10: Young and Nikko teaches the buoyant object as claimed in claim 9 wherein said propulsive device of said propulsion device includes: a sealed

housing; a motor contained within said sealed housing, the axle of said motor protruding through said sealed housing; and a propeller coupled to the protruding portion of said axle of said motor (fig. 5 #10,11).

Regarding claim 11: Young teaches and Nikko the buoyant object as claimed in claim 10 Young does not teach wherein said device includes two said propulsive devices, coupled to said enclosed body being electrically coupled to said control circuit said propulsive devices being responsive to said electrical control signals, said propulsive devices cooperating to provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter. Nikko teaches wherein said device includes two said propulsive devices, coupled to said enclosed body being electrically coupled to said control circuit said propulsive devices being responsive to said electrical control signals (tech notes), said propulsive devices cooperating to provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter (tech notes). It is well known to use two propulsive devices to control a boat to easy maneuvering and control. It would have been obvious to one of ordinary skill in the art to modify Young with Nikko to use two propulsive devices to control a boat adding maneuverability and control by using two propulsive devices.

Regarding claim 12: Young and Nikko teaches the buoyant object as claim in claim 10, where it is well known wherein said device includes a rudder coupled to the rear end of said enclosed body and responsive to said electrical control signals, said propulsive device and said rudder cooperating to provide directed locomotion for said

propulsion device in response to commands transmitted from said transmitter. Using a rudder in conjunction with propulsive devices is well known in the art to allow for more control and maneuverability.

Regarding claim 13: Young and Nikko teaches the buoyant object as claimed in claim 10, wherein said propulsion device includes a servomechanism coupled to said propulsive device to provide rotation to said propulsive device and responsive to said electrical control signals (fig. 1,#22), said propulsive device and said servomechanism cooperating to provide directed locomotion for said propulsion device in response to commands transmitted from said transmitter (col. 3, lines 10-15).

Regarding claim 14: Young and Nikko teaches the buoyant object as claimed in claim 9, which provides means to recharge said batteries housed within said propulsion device comprising: an electrical connection attached to the outer surface of said enclosed body and electrically connected to said battery pack; an external charger with a secondary electrical connection; and means to electrically couple said electrical connection to said secondary electrical connection. It is well known in the art to have a connection to charge the internal batteries of an electronic device.

Regarding claim 15: Young and Nikko teaches the buoyant object as claimed in claim 10 except wherein a protective cover is coupled to said housing of said propulsive device to protect said propeller. Nikko teaches a protective cover is coupled to said housing of said propulsive device to protect said propeller (picture). It would have been obvious to one of ordinary skill in the art to modify Young use the teaching of Nikko to use a protective cover over the propeller to protect the propeller and users using the

device. This would keep down tangling debris from the prop and keep users from injuring there hands if they had grabbed under the device.

Regarding claim 16: Young and Nikko teaches the buoyant object as claimed in claim 9, which provides means to couple external components to said propulsion device comprising: an attachment connection located on the bottom of said enclosed body; an external weight, attachable to said attachment connection, to provide increased stability to said buoyant object; and an external skeg, attachable to said attachment connection, to provide increased tracking control to said buoyant object. It is well know in the art to attach ballast and or a skeg to add stability control. Where skegs and weighted keels have been used on floating objects. Reference Cicoff et al. describes using a weight at the bottom to keep balance and stability and alternately using a rudder to increase maneuverability.

Regarding claim 17: Young and Nikko teaches the buoyant object as claimed in claim 9, the buoyant object as claimed in claim 9, wherein said buoyant object includes an external antenna comprising: an electrically conductive contact coupled to said enclosed body and electrically connected to said receiver antenna; a secondary electrically conductive contact coupled to said buoyant object within said cavity; and a length of antenna wire contained within said buoyant body and electrically connected to said secondary contact, and electrically connected to said receiver antenna. It is well known to extend the antenna to outside an object so that a signal will be picked up by the receiver. It would have been obvious to extend the antenna so the buoyant object won't inhibit the control signal.

Regarding claim 18: Young and Nikko teaches the buoyant object as claimed in claim 9, except wherein said cavity is formed by means of a separate cavity insert permanently attached into said buoyant body, wherein said cavity opening of said cavity insert is in the lower surface of said cavity insert and said buoyant body. Brandstatter teaches wherein said cavity is formed by means of a separate cavity insert permanently attached into said buoyant body, wherein said cavity opening of said cavity insert is in the lower surface of said cavity insert and said buoyant body (col. 2, lines 5-18). It would have been obvious to one of ordinary skill in the art to modify Young and Nikko to have an internal cavity formed in the buoyant object so that the propulsion plant would not interfere with the floating object.

Regarding claim 19: Young and Nikko teaches the buoyant object as claimed in claim 18, except wherein an internal ring is coupled on the inside surface of said buoyant body to said cavity insert ,to provide improved attachment of said cavity insert into said buoyant body. Brandstatter teaches wherein an internal ring is coupled on the inside surface of said buoyant body (fig. 2, #9), to said cavity insert to provide improved attachment of said cavity insert into said buoyant body (col.1, lines 52-60). It would have been obvious to one of ordinary skill in the art to modify Young and Nikko with the teaching of Brandstatter to attach the propulsion device easily and with out screws and fasteners. This would allow easy replacement of the device where it would snap in without having to use a secondary type of fastening means.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cicoff et al. (US Patent # 6601333) discloses a electronic remote control device with a moveable top with weights and keel for stability and control.

Stephens (US Patent # 6865997) discloses a remote control apparatus for maneuvering boats using thrusters to easily control the movement of the boat.

Heideman et al. (US Patent #5947779) discloses a propulsion device for a boat called an azipod.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cross whose telephone number is 571-272-5529. The examiner can normally be reached on 8-4 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARC 571-272-5529



XUAN M. THAI  
SUPERVISORY PATENT EXAMINER  
TC3702